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24 September 1973

National Aeronautics and  
Space Administration  
Lyndon B. Johnson Space Center  
Earth Observations Division  
Houston, Texas 77058

Subject: Contract NAS 9-13310


Gentlemen:

The Quarterly Plans and Progress ~~and the Financial~~  
~~Management Reports~~ for the subject contract are enclosed.

If additional information is necessary, please do  
not hesitate to contact this office.

Very truly yours,

WOLF RESEARCH & DEVELOPMENT CORP.

  
R. J. Baker  
Manager, Contracts

Enclosure

cc: NASA Scientific and Technical  
Information Facility

E73-11033) APPLICABILITY OF SATELLITE  
REMOTE SENSING FOR MONITORING SURFACE  
MINING ACTIVITIES Quarterly Progress  
Report, 8 (Wolf Research and Development  
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## TABLE OF CONTENTS

	<u>page</u>
1.0 INTRODUCTION	1
2.0 PROGRESS (8 June 1973 to 8 September 1973)	2
2.1 SURFACE MINE CENSUS	2
2.2 OTHER PROGRESS	2
3.0 PROBLEMS	3
4.0 PLANS	4

SECOND QUARTERLY PROGRESS REPORT

(8 June - 8 September 1973)

APPLICABILITY OF SATELLITE  
REMOTE SENSING FOR MONITORING  
SURFACE MINING ACTIVITIES

SKYLAB EREP INVESTIGATION 9669  
TECHNICAL MONITOR: Roger Hicks

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24 September 1973

## 1.0 INTRODUCTION

The objective of this investigation is to evaluate EREP imagery as a means of detecting and monitoring strip mines, their effects, and reclamation activities. EREP S-190 A and S-190 B imagery of a tri-state test area will be analyzed, and some S-192 thermal imagery during a night time pass is desired in hopes of detecting acid waste waters whose temperatures might exceed those of the surrounding environment.

Initially, the investigation will consist of a census of active and inactive strip mines along with estimates of disturbed and reclaimed acreage. Notable damage to the environment will also be included.

The primary test site (816556) extends from latitude 39°00'N to 40°30'N, and longitude 80°00'W to 83°00'W; and encompasses portions of Ohio, West Virginia, and Pennsylvania. The alternate test site (816557) extends from latitude 37°00'N to 39°00'N, and longitude 86°00'W to 89°00'W; and encompasses portions of Indiana, Kentucky, and Illinois.

## 2.0 PROGRESS (8 June 1973 to 8 September 1973)

### 2.1 SURFACE MINE CENSUS

State of Pennsylvania officials in the Department of Mines and Department of Reclamation have been contacted by telephone and visitation. Locations and type of mining operations within our test site area were extracted from their files and have been transferred to our "master topographic map index".

### 2.2 OTHER PROGRESS

There has been limited effort expended during this period because no Skylab imagery has been received. The plans outlined in the March 8 - June 8, 1973 progress reports have not been initiated since data acquisition of Skylab 2 barely covered the outer most edge of our proposed test site area.

### 3.0 PROBLEMS

The lack of receipt of Skylab imagery within our test site area is our present concern. This problem has been discussed with the Technical Monitor, Mr. Roger Hicks, and personnel responsible for distribution of data. We have been assured that we shall receive the data within thirty days.

#### 4.0 PLANS

It is anticipated that after receipt of Skylab imagery, we will initiate the actions outlined under "PLANS" in the previous Progress Report. However, if Skylab 3 data acquisition areas do not include a major portion of our present proposed test sites, then we may have to modify the calibration areas to conform to S-190 coverage.